Sohaila Kandil

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EDUCATION

Egypt – Japan University of Science and Technology (E-JUST)
Bachelors, Computer Science and Engineering *Alexandria, Egypt*

- Expected graduation year: 2024
  University courses: Linear Algebra – Calculus – Probability and statistics – discrete mathematics – computer programming with python – machine learning – deep learning – computer vision – data structures – analysis and design of algorithms – computer networks – data engineering – software engineering – computer networks – computer organization.

25 January high school, Alexandria — high school

- Graduation year: 2020
- Received the high school diploma (math section) with a grade of 98.9%.

SKILLS

- **Programming Languages:** Python – C – C++ – PHP – MATLAB – Julia – Java.
- **Technologies:** Data structures and Algorithms in python and C++ – Data analysis – Machine learning and neural networks – Embedded systems – Web development (frontend and backend engineering) – Software engineering systems.

WORK EXPERIENCE & INTERNSHIPS

Egypt makes Electronics – EME **Jul 2022 – Sep 2022**
Embedded systems internship (certificate) *Hybrid*

- Designing the drivers for the AVR-Atmega32.
- Designing a machine with an Atmega32 chip that can work as a calculator, alarm, and light sensor.

Egypt makes Electronics – EME **Jul 2023 – Aug 2023**
Machine learning internship *Hybrid*

- Internship Course Content: linear classification – linear regression – neural networks – GANs – reinforcement learning.
- Utilized TensorFlow-Keras to design a model analyzing diverse individual attributes, including responses to questions, gender, and nationality. Developed and implemented a classification model to identify autism, followed by creating a k-means clustering algorithm to detect autism subtypes.

International academy **Sep 2023 – Sep 2023**
python course instructor *Alexandria*

- Teaching programming fundamentals in Python to children aged 6 to 10.
- Course contents: Scratch – functions – data types – loops – algorithms – data structures.
- This course utilized games, programming contests, and challenges to engage the children in learning.

TECHNICAL PROJECTS

Data gathering and analysis of the scientific papers written by Egyptian authors (Github)

- collected data of Egyptian professors' names by web scraping Google scholar website
- We utilized the Semantic Scholar website API to extract paper information, resulting in a dataset comprising 31,000 papers.
- Created two graphs: one representing papers where each node signifies a paper and connections denote citations, and another for co-authorship where nodes represent authors and connections indicate collaborations.
- performed data analysis: measure papers centrality and determine which papers were cited the most Using Networkx library in python.
- Currently, we are expanding our dataset to include papers from the Arabic world, analyzing this additional data, and planning to publish our findings in a journal.

Andalus store: A website for a grocery shop (Backend project) (Github)

- created a database for the website using mysql and then we combined this database to our website using PHP.
- Key features of the website: Filtering Capability -- Search Functionality -- Shopping Cart -- Logins and Signups -- Online Ordering -- Admin Discount Application -- Product Nationality Information -- Filtering out Boy Cut Products.
- uploaded our website on a server called webhostapp.

Using-Yolo-algorithm-for-object-detection (Github)

- followed the algorithm's design as outlined in the paper "You Only Look Once: Unified, Real-Time Object Detection" to implement the YOLO version 1 algorithm from scratch using pytorch in python.
- implemented the YOLO version 1 algorithm for object detection on the Pascal dataset

Arabic Sign Language to Spoken Words Translation Using a Neural Network (Github)

- built a convolutional neural network (CNN) that predicts the patterns of the Arabic sign language using tensor flow - Keras library and translates it to arabic text.
- The accuracy of the model reached 99.5%.

Building a neural network from scratch that predicts the number digits (Github)

- designed an ANN neural network totally from scratch to predict the digits with 85% accuracy.

COURSES

Devisionx (certificate)

Computer vision and machine learning course

course content: applying filters to images – detecting patterns – object detection – supervised learning and image classification.

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Computer vision course

- built a self driving car using a raspberry pi microcontroller.
- We programmed this car to detect the obstacles in its way.

GDSC, E-JUST (certificate)

web development course

- studied html,CSS for designing the front end of the web pages.

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C course

CONTESTS

- **IEEE-Extreme programming contest (certificate)** **2022**
- **ECPC programming contest (certificate)** **2023**